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ABSTRACT

The fact that environmental occupations cannot be easily categorized reflects the extent to which many occupations and industries are increasing their focus on the environment. Heightened public awareness of the environment and increased regulation through government pollution control and clean-up laws are influencing the trend toward an increased environmental focus in existing jobs and the emergence of new environmentally related jobs and businesses. Environmental occupations are driven by government funding. The focus of government policy has shifted from water supply (1960s) to solid waste management (1970s), from hazardous waste management (1980s) to air quality (1990s). Emerging jobs reflect the current emphasis of government policy on pollution control. Education and training requirements for environmental workers are changing with the times as well. A technical background is required of most environmentalists. Master's degrees or two-year technical degrees are the trend. Environmentalists need field experience and supervisory ability to secure the best jobs. Five types of environmental specialist occupations have been identified: environmental engineers, epidemiologists, wetland ecologists, environmental trainers, and environmental service technicians. Within all five, the trend for related occupations is toward higher educational requirements. Skills in math and science are essential; communication skills are strongly desired. Internships and volunteer opportunities are ways to get on-the-job experience. (Contains 13 annotated print resources and 3 resource organizations.) (YLB)

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Careers in the Environment
Trends and Issues Alerts

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TRENDS AND ISSUES ALERTS

by Bettina A. Lankard
1996

Careers in the Environment

We have come a long way since Smokey the Bear was our sole context for environmental protection. Today, protecting the environment is the focus of national and global attention. It includes such efforts as hazardous waste cleanup, trash/garbage recycling, and restoration of damaged areas. It is not only the job of every citizen, but of an ever-increasing number of workers. The Environmental Business International (EBI) Inc. estimates that environmental industries employ "one worker out of every 12 for the economy as a whole: and another one-half million in the public sector" (Green 1994-95, p. 3). In addition, industries not classified as environmental also employ environmental workers. For example, the construction industry is not commonly thought of as an environmental industry; however, construction laborers have the primary responsibility for cleaning up hazardous waste (Goodman 1992).

It is not easy to identify which workers can be classified as environmentalists—people whose occupations are primarily concerned with protecting the environment. Although such occupations as air quality engineer are easily identified as environmental, others such as surveyor are more difficult to categorize because not all surveyors have an environmental focus to their work. Even the relationship between an industry's focus and its workers' occupations are not always clear. For example, industries that manufacture and market products made from recycled materials like plastic and paper are environmentally focused and their products environmentally friendly, but the workers who produce and sell these products are not necessarily environmentalists (Green 1994-95).

The fact that environmental occupations cannot be easily categorized reflects the extent to which many occupations and industries are increasing their focus on the environment. Heightened public awareness of the environment and increased regulation through government pollution control and clean-up laws are influencing the trend toward an increased environmental focus in existing jobs and the emergence of new environmentally related jobs and businesses.

Environmental occupations are driven by government funding. Air quality has been the focus of government policy in the 1990s; hazardous waste management was the focus in the 1980s; solid waste management in the 1970s; and water supply the focus of the 1960s. Emerging jobs reflect this changing focus of government policy, which currently emphasizes pollution control. According to Parks (1994), "opportunities in pollution control exist in both the development and support environmental protection technologies. The market for environmental technologies is worth $300 billion and may rise to $600 billion by the year 2000" (p. 42).

Education and training requirements for environmental workers are changing with the times as well. A technical background is required of most environmentalists. "Science and engineering continue to be at the core of 'green' occupations and specialized training becomes important as competition for jobs increases" (Green 1994-95, p. 4). Master's degrees or 2-year technical degrees are the trend. Persons with general bachelor of science degrees are losing out. The greater the specialization within a program (e.g., environmental engineer with a hazardous materials specialty), the greater the person's marketability. Parks (1994) notes that, although educational level is important, it is not enough. Environmentalists need field experience and supervisory ability to secure the best jobs. Most environmental workers work for federal, state, and local agencies, including the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and the U.S. Department of Health and Human Services, Centers for Disease Control. International opportunities are also increasing, particularly in Eastern Europe and Asia.

Green (1994-95) identifies five types of environmental specialist occupations: environmental engineers, epidemiologists, wetland ecologists, environmental trainers, and environmental service technicians. Within all five of these categories, the trend for related occupations is toward higher educational requirements. Skills in math and science are essential and communication skills are strongly desired. Technical knowledge and familiarity with environmental laws and regulations are also important. Internships and volunteer opportunities are promoted as ways would-be environmental workers can get some on-the-job experience.

The following resources contain information about environmental careers and list agencies to contact for further information.

Print Resources

Bruce, M. "Looking for Work? What You Can Expect?" ***Environmental Protection*** 5, no. 4 (April 1994): 45-46, 62.

Examines the challenges faced by environmental professionals during times of greater government regulations and economic growth.

Environmental Protection Agency. ***Careers in Environmental Research***. Washington, DC: Environmental Protection Agency, August 1992. (ED 367 548)

Provides individuals with information about potential careers in environmental research with the agency, lists examples of specific research efforts, and describes future trends in environmental protection.

Goodman, J. F. "A Union Trains for the Future." ***Training and Development*** 46, no. 10 (October 1992): 23-29.

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Describes the training provided by the Laborers' International Union through the Associated General Contractors' Education and Training Fund, which includes (1) skills training (workplace literacy and a career path program) and (2) training in environmental clean-up.

Green, K. "We've Got the Whole World in Our Hands: Environmental Careers." ***Occupational Outlook Quarterly*** 38, no. 4 (Winter 1994-95): 3-15.

Employment outlook, working conditions, and training requirements are presented for the following occupations: environmental engineer, epidemiologist, wetland ecologist, environmental trainer, and emergency responder.

Heimlich, J. E. ***Environmental Studies and Environmental Careers: ERIC/CSMEE Digest.*** Columbus: ERIC Clearinghouse for Science, Mathematics, and Environmental Education, The Ohio State University, 1992. (ED 359 064)

This ERIC Digest helps clarify the meaning of environmental employment and discusses aspects of its present state.

James, K. "Creating a Multiculturally Diverse Profession." ***Pathways to Outdoor Communication*** 5, no. 1 (Spring 1995): 14-18.

Reports on a survey of 50 environmentalists from various ethnic backgrounds regarding promotion of multiethnic involvement in environmental education. Stresses the importance of recognizing culture and building collaborations as a means of increasing the diversity of environmental educators.

Koker, M., and Thier, H. D. "Chemicals in Society: Chemical Education for the Community and the Workplace." ***Bulletin of Science, Technology and Society*** 10, no. 4 (1990): 223-27.

Describes a program for instructing nontechnically trained community and workplace groups about chemicals, toxicity, groundwater, hazardous wastes in the home, risk, and understanding parts per million.

Martin, A. "Environmental Careers: A Garbage Primer for Ecoeds." ***Garbage: The Practical Journal for the Environment*** 4, no. 1 (January-February 1992): 24-30.

Describes job prospects for positions in the environmental field includes suggestions for college study.

Morelli, J. et al. "The New World of Environmental Management." ***Journal of Career Planning and Employment*** 54, no. 1 (November 1993): 37-39.

Describes environmental management and discusses related careers.

Parks, P. "Pollution Abatement Leads Job Market." ***Environmental Protection*** 5, no. 4 (April 1994): 42-44.

Describes the national and global importance of pollution control and highlights the government agencies that present the best opportunities for environmental employment, particularly chemical, petroleum, and metal industries.

Smith-Sebasto, N. J. "Career Development and Opportunities for Students Who Study Environmental Education." ***Journal of Environmental Education*** 24, no. 2 (Winter 1993): 35-38.

Presents information about periodicals and telephone job-banks that list career vacancies and books that describe environmental education career options and explain how to prepare for them.

Tilbury, D. "A Common Ground: Environmental Education and the Cross-Curricular Themes." ***Environmental Education*** 43 (Summer 1993): 8-9, 25.

Examines the overlap between the environmental education curriculum and the content areas of citizenship, economic and industrial understanding, health education, and careers and guidance in Great Britain.

Walker, B. et al. "Educating the Workforce." ***Journal of Environmental Health*** 52, no. 4 (January-February 1990): 220-22.

Identifies environmental health issues that have significant implications for practice in the delivery of environmental health services. Implications for academic preparation of environmental professionals and suggestions for curriculum improvement at the college level are included.

Resource Organizations

Environmental Careers Organization
286 Congress Street, 3rd Floor
Boston, MA 02210 (617) 426-4375
Information about environmental careers, including internship opportunities

Environmental Career Center, Inc.
22 Research Drive, Suite 102
Hampton, VA 23666 (804) 865-0605
Environmental career services, including electronic bulletin board access to job listings

National Association of Environmental Professionals
5165 MacArthur Boulevard, NW
Washington, DC 20016 (202) 966-1500
Career packet about professional environmental careers

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